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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,228	04/04/2005	Eberhard Rau	3243	1262
7590	09/22/2006		EXAMINER	
Striker Striker & Stenby 103 East Neck Road Huntington, NY 11743			PRESTON, ERIK D	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/530,228

Applicant(s)

RAU ET AL.

Examiner

Erik D. Preston

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 19 is rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura (US 6346758 previously cited). Nakamura teaches a stator for an electric machine in the form of a generator for motor vehicles (Abstract) that has a yoke that is comprised of rolled strip-shaped laminations (as seen in Fig. 1) and has axial end surfaces, wherein the stator yoke has an axial length at its inner diameter that is greater than at its outer diameter (as seen in Figs. 5 & 7). The axial length of the chamfer (Figs. 5 & 7, #25) is greater than that of the remainder of the lamination (as is seen in Fig. 5), and the chamfered portion of the yoke extends along the inner circumferential edge (as seen in Fig. 7). Therefore it can be said that the stator yoke of Nakamura has an axial length at its inner diameter that is greater than the axial length of the stator yoke at its outer diameter.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18 & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fritzsche (US 4940913 previously cited).

With respect to claim 18, Fritzsche teaches a stator of an electric machine that has a stator yoke that is comprised of rolled strip-shaped laminations (Fig. 1, #75) and has axial end surfaces, wherein the stator yoke is plastically deformed in the axial direction on an outer circumference of the axial end surfaces (as seen in Fig. 19), but it does not teach the electric machine being in the form of a generator for motor vehicles. However, alternators were extremely well known at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the stator of Fritzsche in an alternator because it provides a stator core that is simply designed, easy to assemble, and economical to manufacture (Fritzsche, Col. 3, Lines 44-50).

With respect to claim 19, Fritzsche teaches a stator for an electric machine that has a yoke that is comprised of rolled strip-shaped laminations (Fig. 1, #75) and has axial end surfaces, wherein the stator yoke has an axial length at its inner diameter that is greater than at its outer diameter (as seen in Fig. 19), but it does not teach the electric machine being in the form of a generator for motor vehicles. However, alternators were extremely well known at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the stator of Fritzsche in an alternator because it provides a stator core that is simply designed, easy to assemble, and economical to manufacture (Fritzsche, Col. 3, Lines 44-50).

Claims 1-3,5-17,20 & 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. (US 2003/0020357 previously cited) in view of Fritzsche (US 4940913 previously cited).

With respect to claim 1, Harada teaches a method for manufacturing a stator core for an electric machine, in which strip-shaped laminations are first stacked to form an essentially block-shaped lamination packet (Fig. 16, #45) that is then shaped into an annular form by roller bending in one of the subsequent steps (as seen in Fig. 15), wherein the stator core has an axial direction that corresponds to a cylinder axis, the annular form having axial end surfaces, but it does not teach that in another of the subsequent steps, the annular lamination packet is plastically deformed in the axial direction at least in parts to an outer circumference of the axial end surfaces. However, Fritzsche teaches an annular lamination packet that is plastically deformed in the axial direction as seen in Fig. 19). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the lamination packet of Harada in view of the lamination packet as taught by Fritzsche because it provides a means for effectively sizing a stator core that is formed from strip-shaped laminations that is resistant to (Fritzsche, Col. 3, Lines 14-50).

With respect to claim 2, Harada in view of Fritzsche teaches the method of claim 1, and Fritzsche teaches that the axial clamping surfaces are formed onto the two axial ends of the annular lamination packet as a result of the plastic deformation of the end surfaces (as seen in Fig. 14).

With respect to claim 3, Harada in view of Fritzsche teaches the method of claim 1, and Fritzsche teaches that at the same time, the outer circumference of the annular lamination packet is pressed in the radial direction and thus plastically deformed (Col. 11, Line 29-Col. 12, Line 4).

With respect to claim 5, Harada in view of Fritzsche teaches the method of claim 1, and Fritzsche teaches that the plastic deformation simultaneously forms an insertion chamfer (as seen in Fig. 14).

With respect to claims 6, 20 & 21, Harada in view of Fritzsche teaches the method of claim 1, and Harada teaches that the laminations have a thickness of 0.5 mm (Paragraph 113).

With respect to claim 7, Harada in view of Fritzsche teaches the method of claim 1, but it does not specifically teach that a number of  $n$  laminations of a lamination packet are positioned in the packet in that same sequence in which they were produced in a stamping die. However, in a separate embodiment (embodiment 1) Harada teaches a lamination stack that is formed by positioning laminations in the stack in the order they were produced. It would have been obvious to one of ordinary skill in the art at the time of the invention to position a number of  $n$  laminations of the lamination packet as taught in Harada's 7<sup>th</sup> embodiment in the packet in that same sequence in which they were produced in a stamping die because Harada does not teach the laminations being stacked in any special order according to their order of production, and also because it would be easier to construct the lamination packets from laminations in the order they are produced rather than shuffling the laminations up for some unspecified reason.

With respect to claim 8, Harada in view of Fritzsche teaches the method of claim 1, and Harada teaches that in before the laminations are stamped out from a lamination sheet blank, its material thickness is determined by means of a measuring device (Paragraph 113) and the desired number of laminations in the essentially block-shaped lamination packet is determined based on a toleranced desired width of the essentially block-shaped lamination packet (which it inherently is).

With respect to claim 9, Harada in view of Fritzsche teaches the method of claim 7 and Harada teaches that the lamination packet is divided into at least two partial lamination packets (Fig. 16, 45A & 45B) and these are joined to form a lamination packet so that at an internal junction point, stamping burrs of adjacent laminations are oriented away from each other (such as is seen in Fig. 3, the burrs are oriented 180° out of line with each other).

With respect to claim 10, Harada in view of Fritzsche teaches the method of claim 7, Fritzsche teaches that the desired number of laminations are stacked to produce a gap-free lamination packet, precisely aligned, pressed against one another through an exertion of force, and Harada teaches that the laminations are attached to one another by means of an attaching technique (Fig. 16, #16), but it does not specifically teaches that the laminations are cleaned. However, cleaning laminations was well known in the art at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to clean the laminations of Harada to remove any debris or chemicals that were transferred to the laminations during pressing.

With respect to claim 11, Harada in view of Fritzsche teaches the method of claim 1, and Harada teaches that outwardly oriented stamping burrs of the laminations are removed.

With respect to claim 12, Harada in view of Fritzsche teaches the method of claim 1, and Harada teaches that the roller bearing occurs while the lamination packet is axially prestressed (by laser welding and electrically insulating resin, Paragraph 113) at the same time.

With respect to claim 13, Harada in view of Fritzsche teaches the method of claim 1, and Harada teaches that the essentially block-shaped lamination packet has two ends, which are attached to each other after the lamination packet undergoes roller bending while being axially prestressed.

With respect to claim 14, Harada in view of Fritzsche teaches the method of claim 1, and Fritzsche teaches that the annular lamination packet that is plastically deformed in the axial direction (as seen in Fig. 19), wherein the axial shaping step reduces the axial length of the stator packet by between 1% and 10% at the outer circumference.

With respect to claim 15, Harada in view of Fritzsche teaches the method of claim 1, and Harada teaches that half tooth welding seams are provided on tooth heads of half teeth and/or the end surfaces of half teeth (Fig. 15, #16).

With respect to claim 16, Harada in view of Fritzsche teaches the method of claim 1, and Harada teaches that welding seams (Fig. 16, #16) are provided, which extend in the axial direction from an axial end surface, but it does not teach that said welding seams only connect up to twenty laminations to one another. However, it would



have been obvious to one of ordinary skill in the art at the time of the invention to form the stator core of Harada from only twenty laminations since it has been held that a difference between the relative dimensions of a claimed device and a prior art device is not considered to be patentably distinct (In *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984)).

With respect to claim 17, Harada in view of Fritzsche teaches the method of claim 1, and Harada teaches that before the roller bending, a stator winding is inserted into the essentially block-shaped lamination packet (Paragraph 118).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. (US 2003/0020357 previously cited) in view of Fritzsche (US 4940913 previously cited) further in view of Chochoy et al. (US 6774511 previously cited). Harada in view of Fritzsche teaches the method of claim 1, and Fritzsche teaches that the plastic deformation of the outer circumference of the lamination packet produces a radial depression, but it does not specifically teach that said radial depression is used for a housing fitting. However, Chochoy teaches that the upper and lower portions of a stator core can be used as fittings for a housing (Fig. 1, #12). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the stator core of Harada in view of Nakamura in view of the housing as taught by Chochoy because it provides a means for carrying two main internal members of an alternator (Chochoy, Col. 7, Lines 1-5).

***Response to Arguments***

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

In response to the applicant's argument that Nakamura fails to teach a stator yoke that has an axial length at its inner diameter that is greater than an axial length at its outer diameter, it is noted that this limitation is taught in Figs. 5 & 7 (as described above).

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 2493414 & US 4202196

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

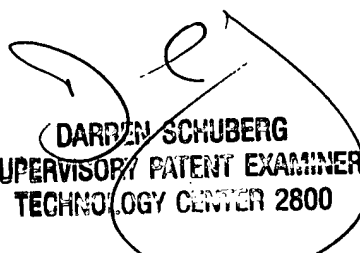
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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